



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,339	02/09/2004	Ryosuke Kuribayashi	Q77322	6498
23373 7590 05/09/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER SINGH, DALZID E	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 05/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,339

Applicant(s)

KURIBAYASHI, RYOSUKE

Examiner

Dalzid Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13, 15, 16, 25-31 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-31 is/are allowed.
- 6) ☒ Claim(s) 2 and 4 is/are rejected.
- 7) ☒ Claim(s) 3, 5-13, 15, 16 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US Patent No. 6,963,436) in view of Wada et al (US Patent No. 6,064,513).

Regarding claim 4, Watanabe et al disclose an optical signal regenerative repeater, as shown in Fig. 1, comprising:

at least one first optical 3R repeater (Fig. 1) which receives an optical communication signal pulse, and regenerates said optical communication signal pulse, wherein said first optical 3R repeater comprises:

a first clock extraction unit (8) which extracts a clock from said optical communication signal pulse and which extract a clock from said optical communication signal pulse and which generates a first optical clock pulse synchronized with said extracted clock, and

a first optical gate (10), which is opened and closed in accordance with a control light (waveform shape light) corresponding to said optical communication signal pulse,

which receives as a controlled light (clock pulses) said first optical clock pulse generated by said clock extraction unit, and which generates a first regenerated signal pulse corresponding to said optical communication signal pulse wherein a pulse time width of said first control light is different from a pulse time width of said first controlled light is different (see col. 4, lines 3-18, pulse width of the control light is increased while pulse width of the controlled light is not increased, therefore the pulse width of the control light and pulse width of the controlled light are different).

Watanabe et al disclose regeneration repeater as disclosed above and differ from the claimed invention in that Watanabe et al do not disclose a second optical 3R repeater which receives said first regenerated signal pulse output by said first optical 3R repeater as an intermediate signal light, and regenerates said optical communication signal pulse based on said intermediate signal light. Wada et al teach multiple regenerating systems connected together in which the second receives regenerated signal pulse output by the first regenerating (see Fig. 1). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to connect one regeneration system to the other as taught by Wada et al. One of ordinary skill in the art would have been motivated to do such in order to maintain desired signal quality over long transmission distances.

Furthermore, as shown in Fig. 1, Watanabe shows that the pulse width of the converted signal light coming out of the regenerator is smaller than the pulse width of the input signal light going into the regenerator. This teaching suggests that

regenerator decreases pulse width of the signal. Based on this, if another generator is coupled to the regenerator as shown in Fig. 1, then the pulse width of the output of the second regenerator will be smaller than pulse width of the optical communication signal pulse going into the regenerator.

Regarding claim 2, as shown in Fig. 1, Watanabe et al show said pulse time width of said first controlled light is smaller than said pulse time width of said first control light.

Allowable Subject Matter

3. Claims 25-31 are allowed.
4. Claims 3, 5-13, 15, 16 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dalzid Singh/
Primary Examiner
Art Unit 2613